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AUTHOR Leifer, Jane
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ABSTRACT

Ten Down's Syndrome children (all 3-4 years old) and four nonhandicapped children and their mothers participated in a study of children's ability to respond to questions. Interactions of each of the 14 mother-child dyads were recorded on videotape and mother-child vocalizations transcribed. The number of appropriate, inappropriate, and indeterminate child responses to maternal questions was calculated and compared. Results showed that nonhandicapped Ss produced a mean of 15% appropriate responses, while the same-age Downs Syndrome Ss showed only minimal (3%) ability to respond appropriately. In contrast, Down's Syndrome children matched for expressive language level with the nonhandicapped group showed superior response abilities (mean 31%). Findings suggested that response abilities of Down's Syndrome Ss are both delayed and different. The importance of acquiring linguistic and social rules in developing conversational skills was emphasized. (CL)

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Conversational Response Skills of Retarded and Nonretarded Children

Jane Leifer

University of Maryland

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Conversational Response Skills in Retarded and Nonretarded Children

In an effort to better understand the language-learning process of handicapped children, researchers have directly compared language development in both handicapped and nonhandicapped children. Three major sample matching methods have been used in these comparative studies. Studies have matched handicapped and nonhandicapped children according to chronological age (Kogan, Wimberger, and Bobbitt, 1969; Marshall, Hegrenes, and Goldstein, 1973), mental age (Jones, 1975; Lyle, 1961; Terdal, Jackson, and Garner, 1976), and language level (Rondal, 1978a; Rondal, 1978b; Ryan, 1975). The results of comparative language studies may provide important information on the nature of language development in young handicapped children. In particular, they may directly contribute to the delay/difference controversy which contrasts the nature of language development in normal and exceptional populations.

Chronological age matching studies have indicated that handicapped children have far fewer linguistic skills than same-age nonhandicapped children (Kogan, Wimberger, and Bobbitt, 1969; Marshall, Hegrenes and Goldstein, 1973). Mental age matching studies have reported conflicting findings including no differences between handicapped and nonhandicapped groups (O'Connor and Hermelin, 1963), findings of superior performance by nonhandicapped children (Jones, 1975; Terdal, Jackson, and Garner, 1976) and findings of superior performance by retarded children (Spreen, 1965). A few studies using mean length of utterance (MLU) scores to match children according to language level have also reported a wide range of findings. For example, Rondal (1978a) and Ryan (1975) found

no differences on certain measures and superior performance by retarded children on other measures.

Typically, comparative studies have examined broad and highly diverse sets of linguistic features. Given the range of findings based on broad parameters, an intensive examination of one specific linguistic ability may provide an additional perspective from which to compare the language development process in retarded and nonretarded children. While recent studies have described how handicapped children use language in social interactions (Abbeduto and Rosenberg, 1980; Beveridge and Berry, 1977; Brinker, 1982; Mitchell, 1980), there has been relatively little systematic study of specific conversational abilities. The present study therefore examines a particular conversational ability which is of critical importance for engaging in conversational interaction. If young children are to effectively participate in dialogue, they must learn to appropriately respond to questions addressed to them. This study of children's ability to respond to questions applies both to same-age and same-language level matching procedures. By using both matching procedures, one has an opportunity to measure any delay in the acquisition of response skills as well as to control for the influence of such a delay.

Method

Subjects

Fourteen mother-child dyads served as subjects. These subjects formed three groups. The first group included four nonhandicapped children ages 18-23 months. Their mean length of utterance scores ranged from 1.0-1.5 with a median of 1.0. The second group consisted of four handicapped mentally retarded children who were matched with the nonhandicapped

group for chronological age at ages 18-23 months. The third group included six mentally retarded children matched with the nonhandicapped group for expressive language ability. Their MLU scores ranged from 1.0-1.5 with a median of 1.1 Their chronological ages ranged from 3:6-4:6 with a mean age of 4:0. All mentally retarded children were diagnosed as having the Trisomy 21 type of Down's Syndrome and were identified as being from middle class families.

Each of the fourteen dyads interacted in half-hour free play sessions held in a playroom. These interactions were recorded on videotape. All maternal and child vocalizations were then transcribed. Following completion of the transcription process, the identity and diagnostic category of the subjects were not available to the coders during the coding process.

Results

The number of appropriate, inappropriate, and indeterminate child responses to maternal questions was calculated and compared. Percentage scores were determined which represented the number of child responses divided by the total number of maternal questions asked. While for all three groups of children, the ability to respond appropriately to a maternal question was found to be relatively undeveloped, the handicapped same-language level group exhibited significantly greater response abilities than both the nonhandicapped and the same-age handicapped groups. Nonhandicapped children produced a mean of 15% appropriate responses with individual scores ranging from 8% - 19%. Same-age handicapped children showed almost no ability to respond appropriately (mean = 3%) with individual scores ranging from 0 - 7%. In contrast, the same-language level handicapped group exhibitied superior response abilities (mean = 31%) with a range from 17-48%. These group differences were significant (Kruskal-Wallis, $p < .01$) as were the differences between each pair of groups (Mann Whitney U, $p < .01$). Consistent with the overall finding for appropriate response

performance, the handicapped same-language level group also showed the strongest response performance on all five question types.

An examination of the nature of inappropriate responses indicated that for all three groups of children the great majority of inappropriate responses consisted of failures to produce any response at all (coded as "no response"). However, group differences were found in the frequency of "no responses" (Kruskal-Wallis, $p < .05$) with significant differences between each pair of groups. The handicapped same-language level group produced significantly fewer "no responses" (mean = 65% of all inappropriate responses) than either the handicapped same-age group (mean = 99%) or the nonhandicapped group (mean = 81%) (Mann-Whitney U, $p < .05$).

For all three groups, unrelated responses accounted for far fewer of the inappropriate responses produced. However, the handicapped same-language level group produced a higher frequency of unrelated responses (mean = 27% out of all inappropriate responses) than either the handicapped same-age group (mean = 1%) or the nonhandicapped group (mean = 14%). A signficant group difference was found (Kruskal-Wallis, $p < .05$). Further analysis indicated a significant difference between the handicapped same-age and same-language level groups ($p < .005$). There were no clear differences in the frequency of "no responses" and unrelated responses according to question type. Indeterminate responses were generally low in frequency with group means ranging from 12-26%. There were no signficant differences in the production of indeterminate responses across all three groups.

Discussion

Results from the same-age matching procedure suggest that the response

abilities of retarded children are in fact delayed. At ages eighteen to twenty-three months, nonhandicapped children are already beginning to respond appropriately to maternal questions while retarded children at this age produced no responsive behavior. The same-language level matching procedure provided a different comparative perspective. This matching indicated superior response skills for retarded children at the one word stage of development when compared with nonhandicapped children at the same syntactic stage. Retarded children produced more appropriate responses and fewer inappropriate responses.

In addition, the analysis of inappropriate responses indicated that retarded children produced fewer "no responses" and more "unrelated responses" than nonhandicapped children. These results suggest that retarded children are engaging in more turn taking behaviors than nonhandicapped children at the one word stage. Unlike nonhandicapped children, retarded children were actively assuming their conversational turn by producing an utterance immediately following the mother's question. While these utterances were not yet appropriately responsive to the demands of the mother's request, they nonetheless suggest a sensitivity to the conversational rule which specifies that a conversational turn is required following an interrogative.

These findings suggest that language development in retarded children is both delayed and different. Given the double perspective afforded by both matching procedures, it appears that the application of a delay-difference dichotomy in characterizing the development of language in retarded and nonhandicapped children may be somewhat misleading. Applying such a dichotomy (delay or difference), implies the assumption that these two descriptive concepts are mutually exclusive. However, the findings

presented here suggest that the simultaneous use of both descriptive concepts may be necessary to adequately characterize and compare language acquisition in these two populations.

It appears that certain aspects of language development in retarded children emerge at a slower rate and follow different developmental patterns than those found for nonhandicapped children. In particular, the findings reported here suggest that the synchrony of syntactic development and communicative competence differs in both groups. If there is in fact a similar order of acquisition within linguistic domains, but a different synchrony across domains, this could account for the wide range of findings reported in the comparative research literature. Even when handicapped and nonhandicapped children are matched for syntactic level, certain linguistic features may show no differences in both groups, other features may be more advanced in nonhandicapped children, and still others may be more advanced in the handicapped group.

Finally, these findings also serve to contrast the roles of two highly important factors which directly influence the language acquisition process. Language-learning requires the acquisition of both social and linguistic rules. This interplay of social and linguistic rules is especially signficant for the acquisition of conversational skills such as the response skill studied here. These findings serve to distinguish the roles of social and linguistic factors as they suggest that the acquisition of conversational response rules is not determined by the child's expressive language ability as measured by the MLU score, but rather is directly influenced by social experiential factors as measured by the child's age.

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